

WHAT IS CLAIMED IS:

- 1        1.     A method for transmitting data across a network comprising:  
2              receiving packets of data;  
3              combining the packets of data based on packet header destination information to  
4              form a first combined file;  
5              compressing the first combined file to form a first compressed file; and  
6              transmitting the first compressed file.
  
- 1        2.     The method for transmitting data across a network according to claim 1,  
2              further comprising repacketizing the first compressed file, wherein the transmitting step  
3              transmits the repacketized first compressed file.
  
- 1        3.     The method for transmitting data across a network according to claim 1, wherein  
2              the packets combined to form the first combined file have headers addressed to the same  
3              first subnetwork, the first subnetwork comprising a plurality of users.
  
- 1        4.     The method for transmitting data across a network according to claim 3, further  
2              comprising inserting headers addressed to the first subnetwork on the packets of the  
3              repacketized first compressed file.
  
- 1        5.     The method for transmitting data across a network according to claim 3, further  
2              comprising:  
3                  selecting a second group of packets of data with headers addressed to a second  
4              subnetwork;  
5                  combining the second group of packets of data to form a second combined file;  
6                  compressing the second combined file to form a second compressed file; and  
7                  transmitting the second compressed file.

1       6.     The method for transmitting data across a network according to claim 5, further  
2     comprising repacketizing the second compressed file, wherein the transmitting step  
3     transmits the repacketized second compressed file.

1       7.     The method for transmitting data across a network according to claim 6, further  
2     comprising inserting headers addressed to the second subnetwork on the packets of the  
3     repacketized second compressed file.

1       8.     The method for transmitting data across a network according to claim 5, wherein  
2     the compressing steps compress the first combined file according to a first compression  
3     algorithm and compress the second combined file according to a second compression  
4     algorithm.

1       9.     The method for transmitting data across a network according to claim 1, wherein  
2     the receiving step receives the packets of data from a third subnetwork.

1       10.    The method for transmitting data across a network according to claim 1, further  
2     comprising ignoring packets destined for at least one of the third subnetwork and a fourth  
3     subnetwork based on header destination information.

1       11.    A method for transmitting data across a network comprising:  
2              receiving packets of data;  
3              combining and compressing the packets of data destined for a first subnetwork  
4     according to a first compression algorithm to create a first compressed file; and  
5              combining and compressing the packets of data destined for a second subnetwork  
6     according to a second compression algorithm to create a second compressed file.

1       12.    The method for transmitting data across a network according to claim 11, wherein  
2     the combining and compressing the packets of data destined for a first subnetwork  
3     step further comprises compressing the packets of data destined for the first  
4     subnetwork according to a first compression algorithm based upon first header

5 destination information and the combining and compressing the packets of data  
6 destined for a second subnetwork step further comprises compressing the packets  
7 of data destined for the second subnetwork according to a second compression  
8 algorithm based upon second header destination information.

1 13. The method for transmitting data across a network according to claim 11, further  
2 comprising:

3 repacketizing the first compressed file;  
4 repacketizing the second compressed file; and  
5 transmitting the packets of the repacketized first compressed file and the packets  
6 of the repacketized second compressed file.

1 14. The method for transmitting data across a network according to claim 11, further  
2 comprising ignoring packets destined for a third subnetwork based on third header  
3 destination information.

1 15. An apparatus for transmitting data across a network comprising:

2 an input that receives packets of data;  
3 a controller that combines packets of data based on packet header destination  
4 information to form a first combined file;  
5 a first compressor that compresses the first combined file to form a first  
6 compressed file; and  
7 an output that outputs the first compressed file to the network.

1 16. The apparatus for transmitting data according to claim 15, wherein the controller  
2 repacketizes the first compressed file and the interface outputs the repacketized  
3 compressed file to the network.

1       17. The apparatus for transmitting data across a network according to claim 15,  
2       wherein the packets combined to form the first combined file have headers addressed to  
3       the same first subnetwork, the first subnetwork comprising a plurality of users.

1       18. The apparatus for transmitting data across a network according to claim 17,  
2       wherein the controller inserts headers addressed to the first subnetwork on the packets of  
3       the repacketized first compressed file.

1       19. The apparatus for transmitting data across a network according to claim 17,  
2       further comprising a second compressor, wherein the controller selects a second group of  
3       packets of data with headers addressed to a second subnetwork and combines the second  
4       group of packets of data to form a second combined file, the second compressor  
5       compresses the second combined file to form a second compressed file, and the output  
6       transmits the second compressed file.

1       20. The apparatus for transmitting data across a network according to claim 19,  
2       wherein the controller repacketizes the second compressed file and the output transmits  
3       the repacketized second compressed file.

1       21. The apparatus for transmitting data across a network according to claim 20,  
2       wherein the controller inserts headers addressed to the second subnetwork on the packets  
3       of the repacketized second compressed file.

1       22. The apparatus for transmitting data across a network according to claim 19,  
2       wherein the first compressor compresses the first combined file according to a first  
3       compression algorithm and the second compressor compresses the second combined file  
4       according to a second compression algorithm.

1       23. The apparatus for transmitting data across a network according to claim 15,  
2       wherein the input receives the packets of data from a third subnetwork.

1       24. The apparatus for transmitting data across a network according to claim 15,  
2       wherein the controller ignores packets destined for at least one of the third subnetwork  
3       and a fourth subnetwork based on header destination information.

1       25. An apparatus for transmitting data across a network comprising:  
2              an input that receives packets of data; and  
3              a controller that combines and compresses the packets of data destined for a first  
4       subnetwork according to a first compression algorithm to create a first compressed file,  
5       and combines and compresses the packets of data destined for a second subnetwork  
6       according to a second compression algorithm to create a second compressed file.

1       26. The apparatus for transmitting data across a network according to claim 25,  
2       wherein the controller further compresses the packets of data destined for the first  
3       subnetwork according to a first compression algorithm based upon first header  
4       destination information and compresses the packets of data destined for the second  
5       subnetwork according to a second compression algorithm based upon second header  
6       destination information.

1       27. The apparatus for transmitting data across a network according to claim 25,  
2       wherein the controller repacketizes the first compressed file, repacketizes the second  
3       compressed file and transmits the packets of the repacketized first compressed file and the  
4       packets of the repacketized second compressed file.

1       28. The apparatus for transmitting data across a network according to claim 25,  
2       wherein the controller ignores packets destined for a third subnetwork based on third  
3       header destination information.